CLAIMS

1. Process for producing a multilayer flat film containing a polyamide layer and a layer of another polymer, characterized in that the polyamide layer is essentially formed from an intrinsically gel-free, randomly branched polyamides at least composed of units derived from:
a. AB monomers, which are understood to be a monomer possessing both a carboxylic acid group (A) and an amine group (B),
b. at least one compound I, being a carboxylic acid (A_v) with functionality $v \geq 2$ or an amine (B_w) with functionality $w \geq 2$,
c. at least one compound II, being a carboxylic acid (A_v) with functionality $v \geq 3$ or an amine (B_w) with functionality $w \geq 3$, with compound II being a carboxylic acid if compound I is an amine is or with compound II being an amine if compound I is a carboxylic acid, wherein the amounts of units derived from all carboxylic acids and amines in the polyamide satisfy formula 1

$$P < 1 / [(F_A - 1).(F_B - 1)] \qquad (1)$$

where:

$$P = [\Sigma(n_i.f_i)]_X / [\Sigma(n_i.f_i)]_Y \qquad (2)$$

where $P \leq 1$ and either X = A and Y = B or X = B and Y = A and

$$F = \Sigma (n_i.f_i^2) / \Sigma (n_i.f_i) \qquad (3)$$

for, respectively, all carboxylic acids (F_A) and amines (F_B), wherein f_i is the functionality of a carboxylic acid (v_i) or amine (w_i), n_i is the number of moles of a carboxylic acid or amine and the summation is conducted for all units derived from carboxylic acids and amines in the polyamide.

2. Process according to claim 1 wherein the other polymer is polyethylene.

3. Process according to claim 2 wherein the polyethylene is a non-linear

polyethylene.

4. Process according to any one of claims 1-3 wherein the polyamide layer and the layer of the other polymer are adjacent to each other.

5. Multilayer flat film containing a polyamide layer and a layer of another polymer, characterized in that the polyamide layer is essentially formed from an intrinsically gel-free, randomly branched polyamides at least composed of units derived from:
a. AB monomers, which are understood to be a monomer possessing both a carboxylic acid group (A) and an amine group (B),
b. at least one compound I, being a carboxylic acid (A_v) with functionality $v \geq 2$ or an amine (B_w) with functionality $w \geq 2$,
c. at least one compound II, being a carboxylic acid (A_v) with functionality $v \geq 3$ or an amine (B_w) with functionality $w \geq 3$, with compound II being a carboxylic acid if compound I is an amine is or with compound II being an amine if compound I is a carboxylic acid, wherein the amounts of units derived from all carboxylic acids and amines in the polyamide satisfy formula 1

$$P < 1 / [(F_A - 1).(F_B - 1)] \qquad (1)$$

where:

$$P = [\Sigma(n_i.f_i)]_X / [\Sigma(n_i.f_i)]_Y \qquad (2)$$

where $P \leq 1$ and either X = A and Y = B or X = B and Y = A and

$$F = \Sigma (n_i.f_i^2) / \Sigma (n_i.f_i) \qquad (3)$$

for, respectively, all carboxylic acids (F_A) and amines (F_B), wherein f_i is the functionality of a carboxylic acid (v_i) or amine (w_i), n_i is the number of moles of a carboxylic acid or amine and the summation is conducted for all units derived from carboxylic acids and amines in the polyamide.